

IN THE CLAIMS

The status of the claims as presently amended is as follows:

1. (*Currently Amended*) A sound reproducing apparatus for driving a plurality of speakers with two of the speakers having a known distance therebetween to reproduce multi-channel sound, the sound reproducing apparatus comprising:

a generator ~~that generates~~ configured to generate a measuring signal and ~~supplies~~ supply the measuring signal to ~~a to-be-detected speaker~~ each of the plurality of speakers;

at least two sensors ~~disposed in~~ positionable to a listening position, each of the at least two sensors transmitting a reception notification when receiving a measuring sound wave radiated from ~~the to-be-detected each of the~~ speakers in accordance with the measuring signal;

a time difference measuring unit ~~that configured to~~ measures, ~~as to each of the at least two sensors,~~ a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;

a distance calculator ~~that configured to~~ calculate ~~[[s]], as to each of the at least two sensors,~~ a distance between ~~each of the~~ at least two sensors and a distance between each of the at least two sensors and each of the to-be-detected two speakers based on the measured time difference and the known distance between the two speakers;

a position calculator ~~that configured to~~ calculate ~~[[s]]~~ a position of ~~the to-be-detected each of the two speakers~~ based on ~~[[a]]~~ the calculated distance between the at least two sensors and the calculated distance between each of the two speakers from each of the at least two sensors; and

a storage that stores the calculated position of ~~the to-be-detected two speakers~~ relative to the at least two sensors.

2. (*Currently Amended*) ~~The A~~ sound reproducing apparatus according to Claim 1, for driving a plurality of speakers to reproduce multi-channel sound, the sound reproducing apparatus comprising:

a generator configured to generate a measuring signal and supply the measuring signal to a to-be-detected speaker of the plurality of speakers;

at least two sensors disposed in a listening position, each of the at least two sensors transmitting a reception notification when receiving a measuring sound wave radiated from the to-be-detected speaker in accordance with the measuring signal;

a time difference measuring unit configured to measure, as to each of the at least two sensors, a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;

a distance calculator configured to calculate, as to each of the at least two sensors, a distance between each of the at least two sensors and the to-be-detected speaker based on the measured time difference;

a position calculator configured to calculate a position of the to-be-detected speaker based on a distance between the at least two sensors and the calculated distance;

a storage that stores the calculated position of the to-be-detected speaker; and

a speaker layout corrector ~~that changes~~ configured to change over signal lines from an amplifier to the speakers and correct[[s]] an incorrect layout of the speakers when it is judged that respective speaker positions stored in the storage are out of a predetermined relative position relationship of the speakers.

3. (Currently Amended) The sound reproducing apparatus according to Claim 1, further comprising a sound field controller ~~that configured to~~ produce[[s]] sound image localization as if the speakers were located in predetermined recommended positions, respectively, based on respective positions of the speakers stored in the storage.

4. (Canceled)

5. (Currently Amended) A sound reproducing apparatus for driving a plurality of speakers to reproduce multi-channel sound, the sound reproducing apparatus comprising:

a generator ~~that configured to~~ generate[[s]] a measuring signal and ~~supplies~~ supply the measuring signal in turn to at least two measuring speakers of the plurality of speakers in turn, ~~the measuring speakers~~ having known positions with respect to a listening position;

a sensor ~~that is~~ attached to a to-be-detected speaker and transmits a reception notification as to each of the at least two measuring speakers when receiving a measuring sound wave radiated from each of the measuring two speakers in accordance with the measuring signal;

a time difference measuring unit ~~that configured to~~ measure[[s]], as to each of the at least two measuring speakers, a time difference between a time instant when the measuring

signal is generated and a time instant when the reception notification is received from the sensor;

a distance calculator ~~that configured to calculate~~[[s]], ~~as to each of the at least two speakers;~~ a distance between each of the measuring two speakers and the to-be-detected speaker based on the measured time difference;

a position calculator ~~that configured to calculate~~[[s]] a position of the to-be-detected speaker based on ~~[[a]] the known~~ distance between the ~~at least two~~ measuring speakers and the calculated distance; and

a storage that stores positions of the ~~at least two measuring~~ speakers and the calculated speaker position.

6. (*Currently Amended*) The sound reproducing apparatus according to Claim 5, further comprising a speaker layout corrector ~~that configured to change~~[[s]] over signal lines from an amplifier to the speakers and correct[[s]] an incorrect layout of the speakers when ~~it is judged that~~ respective speaker positions stored in the storage are out of a predetermined relative position relationship of the speakers.

7. (*Currently Amended*) The sound reproducing apparatus according to Claim 5, further comprising a sound field controller ~~that configured to produce~~[[s]] sound image localization as if the speakers were located in predetermined recommended positions, respectively, based on respective speaker positions stored in the storage.

8. (*Currently Amended*) A method of identifying positions of a plurality of speakers ~~by use of~~ using at least two sensors disposed in a listening position, the method comprising the steps of:
generating a measuring signal and supplying the measuring signal to one of the plurality of speakers;

transmitting a reception notification when each of the at least two sensors receives a measuring sound wave radiated from the ~~to-be-detected one~~ speaker in accordance with the measuring signal;

measuring, ~~as to each of the at least two sensors;~~ a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors;

calculating, as to each of the ~~at least two~~ sensors, a distance between each of the at least two sensors and the ~~to-be-detected~~ one speaker based on the measured time difference;
calculating a position of the ~~to-be-detected~~ one speaker based on a distance between the at least two sensors and the calculated distance; and
storing the calculated position of the speaker into a storage; and
changing over signal lines from an amplifier to the speakers and correcting an incorrect layout of the speakers when stored positions of the speakers are out of a predetermined relative position relationship of the speakers.

9. (*Canceled*)

10. (*Original*) The method according to Claim 8, further comprising the step of producing sound image localization as if the speakers were located in predetermined recommended positions respectively, based on stored positions of the speakers.

11. (*Currently Amended*) A method of identifying a position[[s]] of each of a plurality of speakers ~~by use of~~ using at least two sensors disposed in a listening position, the method comprising the steps of:

supplying the measuring signal in turn to ~~at least two measuring speakers~~ of the plurality of speakers, ~~the at least two measuring speakers~~ having a known distance from each other;
transmitting, ~~as to each of the two measuring speakers,~~ a reception notification when each of the at least two sensors receives a measuring sound wave radiated from each of the ~~measuring two~~ speakers in accordance with the measuring signal;

measuring, ~~as to each of the at least two measuring speakers,~~ a time difference between a time instant when the measuring signal is generated and a time instant when the reception notification is received from each of the at least two sensors for each of the two speakers;

calculating, ~~as to each of the at least two measuring speakers,~~ a distance between each of the at least two sensors and a distance between each of the two sensors and each of the ~~measuring two~~ speakers based on the measured time difference and the known distance between the two speakers;

calculating positions of the at least two sensors ~~and a distance between the at least two sensors~~ relative to the two speakers based on [[a]] the calculated distance between each of the

at least two sensors and each of the ~~measuring the calculated distance between each of the two~~
~~speakers and a distance between each of the at least two speakers sensors;~~ and
calculating a position of each of the other of the plurality of speakers based on the
calculated positions of the at least two sensors relative to the two speakers; and
storing the calculated position of each of the speakers into a storage.

12. (New) The sound reproducing apparatus according to Claim 1, wherein each of the at least two sensors is positionable independent of the other.

13. (New) The method according to Claim 8, wherein each of the at least two sensors is positionable independent of the other.

14. (New) The method according to Claim 11, wherein each of the at least two sensors is positionable independent of the other.